

**Task 2.3.1**

**Statewide  
CONFIRMATION OF PREVIOUS DECISIONS  
(Compilation of Regional Report Excerpts)**

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**California High-Speed Rail Authority**

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## 1.0 INTRODUCTION

This document is a compilation of excerpts from the regional screening evaluation reports pertaining to the confirmation of previous corridor screening decisions. This report was compiled to facilitate review of the Draft First Screening Report by providing key context material from the Regional Screening Evaluation Reports in one document.

This report compiles the sections from the Regional Screening Reports that describe alignment and station options that were previously studied for high-speed train service by the High-speed Rail Commission or the current High-Speed Rail Authority. Alignments previously studied and withdrawn from consideration are described and reasons for withdrawal are provided.

Information is provided for three of five regions: Bay Area to Merced, Sacramento to Bakersfield, and Los Angeles to San Diego via Orange County. No corridors were withdrawn from consideration in previous studies in the other two regions.

## 2.0 BAY AREA TO MERCED REGION

### 2.1 ALIGNMENT AND STATION DEFINITION

This section describes alignments and stations that were previously studied for high-speed train service by the High-speed Rail Commission or the current High-Speed Rail Authority. Alignments previously studied but since withdrawn from consideration are described first in Section 3.1. Reasons for their withdrawal are provided.

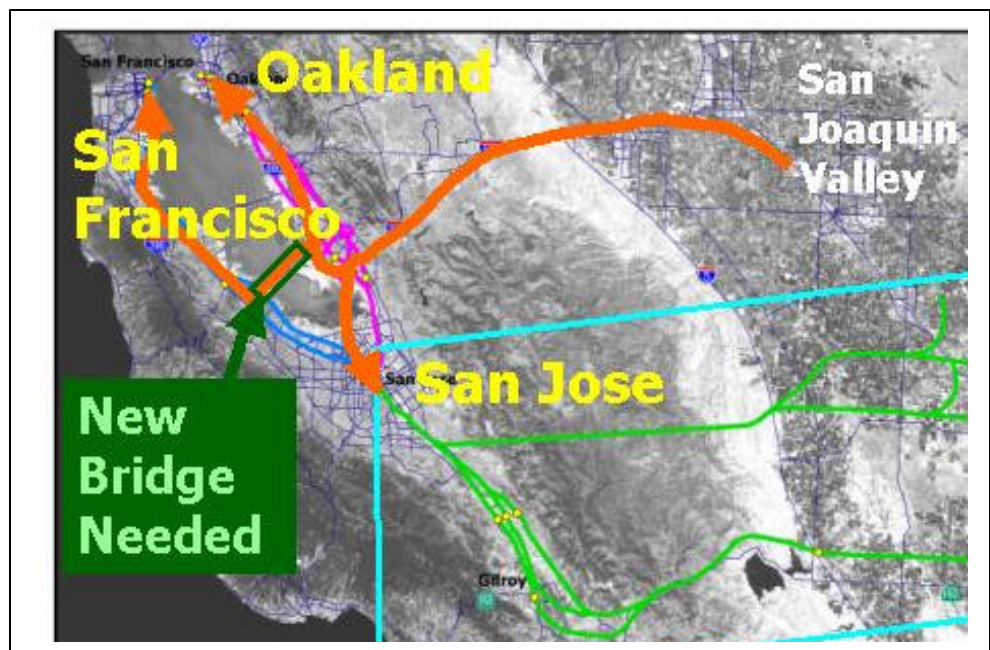
### 2.2 ALIGNMENTS PREVIOUSLY REVIEWED BY HIGH-SPEED RAIL COMMISSION AND AUTHORITY BUT WITHDRAWN FROM CURRENT CONSIDERATION

Three alignments were previously reviewed by the High-Speed Rail Commission and Authority but have since been withdrawn from consideration: (1) Altamont Pass, and (2) Panoche Pass, and (3) I-80 corridor from Oakland to Sacramento. The I-80 corridor may be reevaluated at a future date as a possible extension of a baseline high-speed train system.

#### 2.2.1 Altamont Pass Alignment

One Alignment evaluated in prior studies would pass from the San Joaquin Valley over the Altamont Pass into the Bay Area. For this Altamont Pass alignment, individual high-speed trains would not be able to serve San Jose, San Francisco, and Oakland. An Altamont alignment would require incoming trains to travel to only one of these three destinations. Consequently, service to the Bay Area would be compromised, and total ridership would be lower for an Altamont Pass alignment as compared to the Pacheco Pass Alignment.

The HSRA staff analysis, as summarized in the July 14, 2000 Revised Staff Recommendations for VHS Route Adoption,



recommended the Pacheco Pass rather than the Altamont Pass alignment for the reasons identified above. The analysis noted that significant trade-offs exist between the Altamont and Pacheco Pass alignments. While the Pacheco Pass Alignment was previously estimated to be approximately \$2 billion more costly than an Altamont Alignment because of its longer length, a Pacheco Pass alignment was forecast to have higher ridership and revenue potential from the Central Valley to San Francisco (See Table 2.1-1). Using Year 2015 forecasts, the Pacheco Pass Alignment is estimated to have 1.1 million more riders per year and \$56 million more in annual revenues than the Altamont Pass Alignment.

**Table 2.1- 1**  
**Annual Ridership and Revenue for High Speed Trains**  
**Pacheco and Altamont Pass VHS Alignments (millions)**

Alignment	Bay Area Northern Terminus		
	San Francisco	Oakland	Both*
Pacheco Pass			
Riders	21.12	20.49	21.10
Revenue	\$744	\$725	\$746
Altamont Pass			
Riders	20.02	18.95	
Revenue	\$688	\$657	
*Ridership via Pacheco Pass to San Francisco and Oakland is shown without adding additional trains, i.e., SF and Oakland would each be served with half as many trains in comparison to a terminus at either SF or Oakland. Via the Altamont Pass, however, it is not possible to serve both San Francisco and Oakland along with San Jose.			
Source: Final Report, California High-Speed Rail Corridor Evaluation, HSR-98004, December 30, 1999.			

These two mountain passes also differ in how they would serve Central Valley and Bay Area populations. The Altamont Pass would offer superior service to the Bay Area from the fast growing San Joaquin County area and would provide faster travel times between Sacramento and San Jose or San Francisco. This is the reason this alignment is favored by some Central Valley leaders. An express train traveling between Sacramento and San Jose would take 47 minutes via the Altamont Pass compared to 82 minutes via the Pacheco Pass.

Although the Altamont Pass would provide a more direct link between San Joaquin and Stanislaus counties and the Bay Area population centers, this corridor represents a relatively short distance market with ridership characteristics more fitting a commute corridor than an intercity corridor. The distance between the SR-99 Junction and the San Jose high-speed station would be 66 miles (89 miles to San Francisco). Stanislaus and San Joaquin counties are working with Contra Costa, Alameda and Santa Clara counties on a cooperative transportation planning approach to serve commuters living in the northern Central Valley and working in Southern Alameda county and the Silicon Valley.

Compared to the Altamont Pass, the Pacheco Pass Alignment would reduce travel times between Los Angeles and San Jose by at least 10 minutes (See Table 2.1-2).

However, the greatest benefit of the Pacheco Pass is that all trains would pass through San Jose, regardless of whether San Francisco, Oakland, or both were served. Therefore, from an operational perspective, the Pacheco Pass Alignment would be superior alignments for serving the largest Bay Area markets. The Altamont Pass Alignment would require the system to split at Newark/Fremont to serve either San Jose or San Francisco (or Oakland). This means that only some trains passing through the Altamont Pass from Los Angeles would go to San Francisco, some to Oakland, and some to San Jose. The Pacheco Pass therefore would have superior frequencies of service to the Bay Area and would be less costly and easier to operate.

**Table 2.1-2**  
**VHS Travel Time to the Bay Area from Los Angeles**  
**Compared for Pacheco and Altamont Pass Alignments (minutes)**

Alignment	VHS Express Travel Time from Los Angeles to:	
	San Jose	San Francisco
Pacheco Pass	122	150
Altamont Pass	132	153
Source: Final Report, California High-Speed Rail Corridor Evaluation, HSR-98004, December 30, 1999.		

For the Pacheco Pass Alignment, the number of annual riders to San Jose in the Year 2015 is projected to be 3.3 million, with 5.7 million riders using the downtown San Francisco Station. In contrast, operations under the Altamont Pass Alignment would cut service levels by half to each destination due to the split at Newark/Fremont. Moreover, travel times to San Jose from Los Angeles via Altamont would increase by 10 minutes. As a result, system ridership would drop by 1.1 million per year (See Table 2.1-1).

Another negative aspect of the Altamont Route is that it would require building a new bridge across the environmentally sensitive San Francisco Bay for service to San Francisco.

## 2.2.2 Panoche Pass Alignment

A Panoche Pass Alignment was also reviewed in prior high-speed train studies. This pass is 35-40 miles south of the Pacheco Pass. A Panoche Pass Alignment would be more expensive and would have lower ridership than the Pacheco Pass Alignment. Compared with the Pacheco Pass Alignment, the Panoche Pass Alignment would cost about \$0.5 billion additional for just the mountain pass segment alone.<sup>1</sup> The difference in total system cost with respect to the Pacheco Pass Alignment would be even higher, given the added distance through the Panoche Pass. Although service from Los Angeles to the Bay Area via the Panoche Pass would be slightly faster than via the Pacheco Pass, ridership would be lower by an estimated 300,000 riders per year because the Merced area would not be as well served. In addition, the Panoche Pass Alignment would reduce the high-speed train service provided to the northern portion of the Central Valley (e.g., Stockton and Sacramento), in that trips from northern California to the Bay Area would take substantially longer via this pass.

## 2.2.3 I-80 Corridor from Oakland to Sacramento

Previous High-speed Rail Commission studies considered the I-80 corridor to link the San Francisco Bay Area and Sacramento. These studies concluded that the existing "Capitol" rail service should be improved to speeds of up to 110 mph and would serve as a feeder system to the statewide high-speed train system. The existing rail corridor between Oakland and Benicia has major curve and speed constraints and cannot be upgraded to achieve high speeds without major capital cost implications. The distance between Oakland and Sacramento is relatively short when viewed as an intercity market, and high-speeds are not needed to serve this market. However, a trip from Sacramento to Los Angeles via the I-80 corridor would be approximately 1½ hours longer through the San Francisco Bay Area than a trip from Sacramento to Los Angeles through the Central Valley. Capitol Corridor rail service currently exists between San Francisco and Sacramento, and operating and rail improvements are anticipated for this service. This alignment could be considered as a potential future extension of the high-speed train system but is not proposed to be included in the initial baseline system or in the Program EIS/EIR.

<sup>1</sup> Intercity High-Speed Rail Commission, High-Speed Rail Summary Report and Action Plan, Final Report, December 1966, Table 8.5.

## **3.0 SACRAMENTO TO BAKERSFIELD REGION**

### **3.1 ALIGNMENT AND STATION DEFINITION**

The Sacramento to Bakersfield region, the Central Valley, will provide the connection between Northern and Southern California for the California High-Speed Train system by an alignment that follows the general route of State Highway 99. The system will serve the region via the station cities of Sacramento, Stockton, Modesto, Merced, Fresno, the Tulare area and Bakersfield. A connection to the Bay Area will meet this route in the vicinity of Merced, either north or south of the city, depending on the final selection of an optimal route to San Jose and the southern Bay Area. The Central Valley route will also connect to the Los Angeles area and other Southern California communities on an alignment south or east of Bakersfield, again depending on the selection of an optimal alignment through the Tehachapi Mountains.

### **3.2 PREVIOUS ALIGNMENT AND STATION OPTIONS STUDIED**

Several planning and engineering studies have been completed under the direction of the California Intercity High Speed Rail Commission (Commission) and the current California High Speed Rail Authority (Authority). These studies focused on identifying potential corridors for the implementation of high-speed rail service between northern and southern California and evaluating the feasibility and viability of those corridors. The potential routes were grouped into the three general corridors: Coastal Corridor, Interstate 5 (I-5) Corridor, and Central Valley (SR-99) Corridor.

### **3.3 CONFIRMATION OF REASONS OPTIONS SCREENED FROM FURTHER ANALYSIS**

Initial review concluded that the Coastal Corridor has the least potential for high-speed rail service at maximum speeds exceeding 150 mph. While the Coastal Corridor has the highest population living within a conceptual 10-mile wide strip, it is due to concentrations in the Bay Area and in the Southern California metropolitan areas, rather than spread along the alignment between them. Coastal Corridor travel times between Los Angeles and the San Francisco Bay Area would be significantly longer than those with the other two corridors. This is due to challenging geography along the route, which also partially accounts for the lower population along the intermediate segments of the route. With significantly longer travel times, the projected ridership for this corridor is considerably lower overall. Moreover, this corridor has the highest projected capital costs due to environmental constraints.

These findings were presented to the Commission in May 1995. Based on these findings and the preliminary ridership forecasts, the Commission moved to redirect the focus of study to the I-5 and SR-99 corridors.

Subsequently, a more comprehensive evaluation of the I-5 and SR-99 corridors concluded that although the SR-99 Corridor options are somewhat more costly than the I-5 Corridor options, the SR-99 Corridor offers far better service to the growing Central Valley population, while still offering fast, competitive service between the Los Angeles and San Francisco Bay Area metropolitan regions. The SR-99 Corridor was also found to have the highest overall ridership potential. Additionally, testimony at Commission meetings and at public workshops indicated overwhelming public support for the SR-99 Corridor.

In December 1995, environmental evaluation findings on the two corridors were presented to the Commission. Engineering evaluation findings followed in February 1996. Following the February

presentation, the Commission moved to focus further study on the SR-99 Corridor. This continues to be the focus for the current phase of project development by the Authority.



## 4.0 LOS ANGELES TO SAN DIEGO VIA ORANGE COUNTY REGION

### 4.1 ALIGNMENT AND STATION DEFINITION

This section briefly describes the alignments and stations for the corridor between Los Angeles and San Diego from previous studies that were re-evaluated, and why some options (either previously studied or new) were screened from further analysis based on previous studies or preliminary evaluation. Given the number of current rail studies in Coastal San Diego County, a comparison matrix was prepared for distribution at public scoping meetings. The matrix is included at the end of this section.

### 4.2 PREVIOUS ALIGNMENT AND STATION OPTIONS STUDIED

Previous studies and proposals by the California High-Speed Rail Authority and by Amtrak provided important background for the definition of the LOSSAN corridor improvement options.

#### 4.2.1 California High Speed Corridor Evaluation<sup>2</sup>

The feasibility of upgrading the existing LOSSAN corridor for operating VHS trains was previously studied by the Authority as part of the California High-Speed Rail Corridor Evaluation. The study looked at the incremental improvement of the existing line to allow for gradually faster trains. This study assumed that until the corridor was capable of VHS traffic, a transfer would have to be made at LA Union Station to connect to the statewide system. The study concluded that operation of VHS trains would eventually be possible within the existing corridor, following years of incremental improvements. Major improvements proposed along this corridor included:

- Run-through tracks at LA Union Station
- Trench/Tunnel in Orange/Santa Ana area
- Short Tunnel segment at San Juan Capistrano
- Tunnel under I-5 around San Clemente
- Tunnel at Encinitas station
- Tunnel under Camino Del Mar, to bypass the bluffs
- Tunnel under University Towne Centre (Miramar Hill)

Potential stations were identified at LA Union Station, Norwalk, Irvine, Oceanside, University Towne Centre and San Diego.

In addition to the Los Angeles-San Diego corridor, a connection from LAX to LA Union Station was looked at, assuming the MTA Harbor Subdivision alignment.

These improvement options and stations have been included in one or both of the LOSSAN improvement configurations in this screening evaluation, and the MTA Harbor Subdivision is one of the alignment options under consideration in the LAX-LA Union Station segment.

#### 4.2.2 Amtrak 20-Year Plan<sup>3</sup>

Amtrak issued a 20-year plan in March 2001 for passenger rail improvements in California. These improvements are intended to improve the speed and reliability of passenger service, and provide relief from impacts of the current rail system on sensitive environmental areas and communities. These

<sup>2</sup> Parsons Brinckerhoff. *California High Speed Corridor Evaluation - Environmental Summary*. Prepared for the California High Speed Rail Authority, April 2000.

<sup>3</sup> Parsons Brinckerhoff. *California Passenger Rail System 20-Year Improvement Plan*. Prepared for Amtrak, March 2001.

projects include track and signal work, study of tunnel alignments in conjunction with the Authority and with local rail stakeholders, and station area improvements. Many of the improvements identified as immediate are already underway and fall under the No Build condition for the LOSSAN corridor.

Other proposed improvements, noted by Amtrak as “immediate”, “near-term”, or “vision” are generally included in one or both of the LOSSAN improvement configurations (Options B1a/b, C1a/b, and D1a/b) for the three affected corridor segments. Examples include various double-tracking projects, the fourth main track from LA to Fullerton, curve realignments at Orange Junction and Dana Point (Pacific Highway), and study of double-tracking through Del Mar.

#### **4.2.3 Relationship of Current LOSSAN Configurations to Previous Studies**

Table 4.1-1 summarizes the relationship between the previous studies and current LOSSAN configurations (“a” and “b”) being considered in this screening evaluation.

### **4.3 CONFIRMATION OF REASONS OPTIONS SCREENED FROM FURTHER ANALYSIS**

#### **4.3.1 Dedicated High-Speed System in the Coastal Segment of the LOSSAN Corridor**

A dedicated very high-speed train system in the LOSSAN corridor was previously studied by the California Intercity High-Speed Rail Commission in 1995 and 1996, and compared with an inland route from Los Angeles to San Diego that would parallel I-10 and I-15 Freeways. The Commission recommended the inland route for a variety of reasons, including significant economic and population growth in the Inland Empire and broad public support from affected cities.

The Commission concluded that the LOSSAN corridor would be better suited for incremental improvements to conventional rail service rather than a dedicated corridor. The Commission held a public review period of its Draft Report and Action Plan in October and November 1996, including a public hearing in Los Angeles on October 29, which was attended by approximately 120 people. Comments at the public meeting touched on the environmental obstacles to implementing high-speed train service along the coastal corridor. Implementing high-speed trains along the LOSSAN corridor was perceived by some speakers as a threat to the conventional intercity (Amtrak) and commuter rail services (Metrolink and Coaster) already using the corridor. Some speakers suggested that incremental improvements such as grade-separations would receive greater political support.

Several written comments were received during the public comment period. These comments identified the following issues:

- The bluffs are narrow in some areas and susceptible to failure, in particular the Del Mar Bluffs. Steel wheels-on-steel rails would cause noise and vibration problems that would be dangerous to the fragile bluffs above the beach.
- The existing right-of-way is narrow and currently divides Encinitas. Additional service in the corridor could restrict access and enjoyment of the beach area to visitors and residents.
- To prevent dangerous pedestrian crossings of the tracks, the railroad rights-of-way would be fenced. This would block beach access and concentrate the crossing of pedestrian and vehicle traffic to fewer locations.
- Noise and vibrations from trains would be disruptive to ecologically sensitive coastal areas and lagoons (e.g., San Elijo Lagoon). The salt-water marshes and lagoons are a winter habitat for several sensitive bird species.
- A dedicated right-of-way would require two more tracks at-grade (with fencing) or a double-deck configuration, to accommodate existing rail services and high-speed rail. In Encinitas, there may not be room in the existing right-of-way to add two more tracks at grade, so this could mean a

double-deck configuration. The structures and overhead catenaries could block views, creating a negative aesthetic impact on tourism-related businesses and reducing property values adjacent to the corridor.

The development of the Authority's Business Plan<sup>4</sup> included an evaluation of corridors<sup>5</sup> and over 200 presentations and workshops throughout the State during 1999. The corridor evaluation assumed that the LOSSAN corridor would be upgraded to provide higher operating speeds but would not be a dedicated high-speed system. Several written comments were received during formulation of the Business Plan in 1999. Several cities in Orange County wrote to encourage inclusion of the LOSSAN corridor through Orange County, although the City of Tustin was opposed. Several additional comments were received on the subject of the corridor in San Diego County, reiterating the same themes from the 1996 comments and adding specific references to bluff failures in Encinitas.

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<sup>4</sup> California High Speed Rail Authority. *Building a High Speed Train System for California, Final Business Plan*. June 2000.

<sup>5</sup> Parsons Brinckerhoff. *California High-Speed Rail Corridor Evaluation*. Prepared for California High-Speed Rail Authority, December 1999.

**Table 4.1-1**  
**Relationship of LOSSAN Corridor Configurations with Previous Studies - Los Angeles to San Diego**

Project / Improvement Option	No Build; committed/ funded projects	Corridor Evaluation (CHSRA/PB) 1999	Upgrade to HS Rail (Shared Use)	Upgrade to HS with path to VHS Rail (Shared Use)	Other Related Studies and Proposed Projects
<b>Segment B. LA Union Station to Central Orange County (Anaheim)</b>					
<b>LOSSAN Corridor Improvements</b>		<b>Corridor Evaluation</b>	<b>Configuration "a"</b>	<b>Configuration "b"</b>	
LA to Fullerton:					
Through Service (run-through tracks) at LA Union Station	No Build (Partial Funding)	●	●	●	Corridor Evaluation (CHSRA) Amtrak 20-Year Plan (PS-05) Caltrans Intercity Rail Cap. Prog.
3rd main track; Redondo-Hobart			●		
Hobart Yard Flyover with 3rd/4th main track				●	Amtrak 20-Year Plan (PS-38)
3rd main track; Commerce to Basta	No Build		o	o	Amtrak 20-Year Plan (PS-06) Caltrans Intercity Rail Cap. Prog.
4th main track, Hobart - Commerce			●	●	Amtrak 20-Year Plan (PS-39)
4th main track, Commerce - Fullerton				●	Amtrak 20-Year Plan (PS-07) Caltrans Intercity Rail Cap. Prog. (study funds)
Complete Grade-separation, Electrification		●		●	Corridor Evaluation (CHSRA)
South of Fullerton:					
Complete Grade-separation, Electrification		●		●	Corridor Evaluation (CHSRA) (refers to Orange County Branch)

o Project is included in No Build Alternative, and supports the improvement concept.

● Project is part of the improvement concept

(PS-nn) Project numbers for Amtrak's Pacific Surfliner corridor, from the 20-Year Rail Improvement Plan (March 2001).

**Relationship of LOSSAN Corridor Configurations with Previous Studies - Los Angeles to San Diego (cont'd)**

<b>Project / Improvement Option</b>	<b>No Build; committed/ funded projects</b>	<b>Corridor Evaluation (CHSRA/PB) 1999</b>	<b>Upgrade to HS Rail (Shared Use)</b>	<b>Upgrade to HS with path to VHS Rail (Shared Use)</b>	<b>Other Related Studies and Proposed Projects</b>
<b>Segment C. Central Orange County (Anaheim) to Oceanside</b>					
<b>LOSSAN Corridor Improvements</b>		<b>CHSRA/PB 1999</b>	<b>a</b>	<b>b</b>	
Orange Junction Curve					
Trench/tunnel existing alignment		•	•		Corridor Evaluation (CHSRA)
Increase curve to 90 mph (145 km/h) and tunnel				•	Amtrak 20-Year Plan (PS-61, without tunnel)
Santa Ana Double Track CP La Veta - CP Lincoln (17th St.)	No Build		o	o	DEIR (2001), SCRRA/Metrolink Caltrans Intercity Rail Cap. Prog.
Grade separation				•	
Santa Ana Station Vicinity					
At-grade, w/ station improvements		•	•		Amtrak 20-Year Plan (PS-08)
Grade separation of streets				•	
Irvine Station - siding/platform	Funded by Caltrans		o	o	Amtrak 20-Year Plan (PS-09) Caltrans Intercity Rail Capital Program
San Juan Capistrano (SJC)					
Double track, Avery - SJC			•	•	Amtrak 20-Year Plan (PS-41)
Double-track at-grade; shift station away from tracks					Amtrak 20-Year Plan (PS-62)
Depressed (tunnel) at SJC station		•	•		Corridor Evaluation (CHSRA)
Bypass tunnel under I-5				•	

Dana Point					
Existing Alignment, complete 2nd main track		•	•		SCRRA/Metrolink project (current)
Curve realignment and short tunnel				•	Amtrak 20-Year Plan (PS-42, without tunnel)
San Clemente					
2nd main track (w. of Camino Real)			•	•	Amtrak 20-year (PS-43)
2 main tracks, grade-separated along beach/bluffs			•		Amtrak 20-year (PS-63, viaduct)
2nd main track, San Clemente/CP Songs (San Onofre)			•		Amtrak 20-year (PS-64)
I-5 tunnel bypass, Pico-San Onofre		•		•	Corridor Evaluation (CHSRA)

o Project is included in No Build Alternative, and supports the improvement concept.

• Project is part of the improvement concept

(PS-nn) Project numbers for Amtrak's Pacific Surfliner corridor, from the 20-Year Rail Improvement Plan (March 2001).

**Relationship of LOSSAN Corridor Configurations with Previous Studies - Los Angeles to San Diego (cont'd)**

Project / Improvement Option	No Build; committed/ funded projects	Corridor Evaluation (CHSRA/PB) 1999	Upgrade to HS Rail (Shared Use)	Upgrade to HS with path to VHS Rail (Shared Use)	Other Related Studies and Proposed Projects
<b>Segment C (cont'd). Anaheim-Oceanside (San Diego County portion)</b>		<b>CHSRA/PB 1999</b>	<b>a</b>	<b>b</b>	
San Onofre/Pendleton					
San Onofre-Pulgas, Flores-O'Neill 2nd main track	Part funded for No Build		o	o	Amtrak 20-Year Plan (PS-10, 11) Caltrans Intercity Rail Cap. Prog.
Santa Margarita River Bridge, 2nd main track (Puller to West Brook)		•	•	•	Amtrak 20-Year Plan (PS-12) NCTD (Project Study Report) Caltrans Intercity Rail Cap. Prog.
East Brook-Shell 2nd Main, including bridge over San Luis Rey		•	•	•	Amtrak 20-Year Plan (PS-13) NCTD (PE+Env Only)
Complete Double-Track (San Mateo to San Onofre, rest of SO-Pulgas)		•	•	•	
Oceanside					
Holding Track and Station Improvement					Amtrak 20-Year Plan (PS-14)
Existing Station with 3rd Track		•	•		
Grade-separation from San Luis Rey into Oceanside				•	

o Project is included in No Build Alternative, and supports the improvement concept.

• Project is part of the improvement concept

(PS-nn) Project numbers for Amtrak's Pacific Surfliner corridor, from the 20-Year Rail Improvement Plan (March 2001).

**Relationship of LOSSAN Corridor Configurations with Previous Studies - Los Angeles to San Diego (cont'd)**

Project / Improvement Option	No Build; committed/ funded projects	Corridor Evaluation (CHSRA/PB) 1999	Upgrade to HS Rail (Shared Use)	Upgrade to HS with path to VHS Rail (Shared Use)	Other Related Studies and Rail Improvement Projects
<b>Segment D. Oceanside to San Diego</b>					
<b>LOSSAN Corridor with Design Options</b>		<b>Corridor Evaluation</b>	<b>Configuration "a"</b>	<b>Configuration "b"</b>	
Oceanside					
At grade, w/ holding track at station		•	•		Amtrak 20-Year Plan (PS-14)
Grade separation				•	
Carlsbad					
At grade, 2nd main track		•			Amtrak 20-Year Plan (PS-45)
2nd main track, with partial grade-separation			•		
2nd main track, with full grade-separation				•	
Encinitas					
2nd main track/passing siding, at-grade (Ponto to Encinitas to Solana Bch)			•		Amtrak 20-Year Plan (PS-15,16,17) Caltrans Intercity Rail Cap. Prog.
Grade separation at station		•			Corridor Evaluation (CHSRA)
Complete Grade-separation				•	
Solana Beach					
Solana Beach to Del Mar 2nd main track/San Dieguito Bridge			•	•	Amtrak 20-Year Plan (PS-18) NCTD (PE/Enviro. Study funded for 2001- 2002) Caltrans Intercity Rail Cap. Prog.
Del Mar					
Mid-term shoring of single track	No Build		o		NCTD (2001, ongoing) Caltrans Intercity Rail Cap. Prog.



Double-track in corridor			•		NCTD Del Mar Alignment Study (start July 2001)
Tunnel on alignment inland from bluffs; under Camino Del Mar or I-5		•		•	Amtrak 20-Year Plan (PS-65) Corridor Evaluation (CHSRA) NCTD Del Mar Alignment Study (start July 2001)
Miramar Hill					
Double track Sorrento-Miramar	No Build		o		Caltrans Intercity Rail Capital Program
Tunnel under University City/Miramar Mesa, new station at University Towne Centre (UTC)		•	•		Corridor Evaluation (CHSRA) Amtrak 20-Year Plan (PS-66) RTP 2020 (SANDAG)
By-pass tunnel under I-5				•	Partial study by Amtrak
Elvira/Rose Canyon to Airport					
Elvira to False Bay 2nd main track			•	•	Amtrak 20-Year Plan (PS-21) Caltrans Intercity Rail Cap. Prog.
False Bay-Tecolote Creek 2nd main track	No Build		o	o	Caltrans, NCTD/MTDB (2001, current project)
Tecolote Creek to Friar 2nd main track			•	•	Amtrak 20-Year Plan (PS-67)
Grade Sep - Old Town to Washington				•	
Airport to Santa Fe Depot					
Grade crossing protection			•		
Aerial		•			
Below-grade				•	

o Project is included in No Build Alternative, and supports the improvement concept.

• Project is part of the improvement concept

(PS-nn) Project numbers for Amtrak's Pacific Surfliner corridor, from the 20-Year Rail Improvement Plan (March 2001).

Note: Lagoon and river crossings assume a 2-track minimum and for the "a" and "b" configurations. Replacement of 1-track bridges is included.

## 5.0 REFERENCES

This statewide report is simply a compilation of the information provided in the regional screening reports listed below.

DMJM Harris. Draft Screening Evaluation Report, Sacramento to Bakersfield. August 2001.

HNTB, CH2MHILL. Draft Screening Evaluation Report, Los Angeles to San Diego via Inland Empire Corridor. August 2001.

IBI Group. Draft Screening Evaluation Report, Los Angeles-Orange County-San Diego. August 2001.

Parsons Transportation Group. Draft Screening Evaluation Report, Bay Area-to-Merced. August 2001.

P & D Consultants. Draft Screening Evaluation Report, Bakersfield-to-Los Angeles. August 2001

